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**Minutes of Public Hearing/Meeting on January 31, 2003, in Helena, on the amended notice on proposed adoption and amendment of rules pertaining to numeric standards, etc.**

Call to Order

Chairman Russell called the public hearing to order at 11:00 a.m. on Friday, January 31, 2003, in Room 111 of the Metcalf Building, 1520 East Sixth Avenue, Helena, Montana.

Attendance

Board Members Present: Chairman Joseph Russell, David Fishbaugh, Kim Lacey, Ward Shanahan, Susan Kirby Brooke, and Garon Smith. Russ Hudson participated by telephone.

Board Members Absent: None

Board Attorney Present: Thomas G. Bowe, Assistant Attorney General, Agency Legal Services Bureau

Board Secretary Present: Joyce Wittenberg

Department Personnel Present: Tom Livers, Deputy Director; Art Compton, Administrator, Planning, Prevention and Assistance Division (PPAD)

Court Reporter Present: Theresa Strauch

Interested Persons Present: See attached sign-in sheets

Introduction by Chairman Russell

Chairman Russell stated that the purpose of the hearing was to give interested persons the opportunity to present their views to the Board of Environmental Review about Montana Administrative Register (MAR) Notice No. 17-187, which amended Notice No. 17-171, concerning proposed rules pertaining to numeric water quality standards for electrical conductivity (EC) and sodium adsorption ratio (SAR) in various streams in southeastern Montana. He said that the Board Attorney, Tom Bowe, would read certain notices and provide information about the procedure for the hearing.

Introduction by Assistant Attorney General Tom Bowe

Tom Bowe announced that copies of the proposed rulemaking Notices No. 17-187 and 17-171 are available by the entrance to the hearing room. He asked anyone wishing to make a statement to fill out a form entitled "Notice to Board of Environmental Review." These forms were also available by the entrance to the room.

Mr. Bowe read the Notice of Function of Administrative Rule Review Committee as required by Mont. Code Ann. § 2-4-302(7)(a), and informed the persons at the hearing of the rulemaking interested persons list and of the opportunity to have their names placed on that list, as provided by Mont. Code Ann. § 2-4-302(2)(a).

Mr. Bowe stated that notice of the hearing was contained in MAR Notice No. 17-187, Issue No. 24, published on December 26, 2002, beginning at page 3489. MAR Notice No. 17-187 explained that it is amending MAR Notice No. 17-171, which was published in Issue No. 16 on August 29, 2002, beginning on page 2269.

Mr. Bowe stated that the Board held public hearings on MAR Notice No. 17-171, along with Notice No. 17-170 and Notice No. 17-172, in September 2002 in Miles City and Helena. All three notices pertained to the establishment of numeric water quality standards.

Mr. Bowe announced that persons at the hearing would be given an opportunity to submit their data, views, or arguments, either orally or in writing, concerning the proposed rulemakings, MAR Notice No. 17-187, and the notice which it amends, MAR Notice No. 17-171. He explained how persons could submit written comments after the hearing and announced that written comments should be received by February 7, 2003.

Mr. Bowe summarized the notice. He explained that MAR Notice No. 17-187 amends MAR Notice No. 17-171 to specify flow-based procedures for implementing numeric standards for EC and SAR. It requires persons planning to discharge coal bed methane water to apply to the department for a significance determination. Two alternatives are proposed for New Rule IV. Alternative II includes a non-severability provision that specifies that the nondegradation requirements for EC and SAR and the flow-based procedures for implementing those requirements are non-severable from the numeric standards.

Mr. Bowe stated that the authority of the Board of Environmental Review to make the proposed rulemakings is contained within Mont. Code Ann. § 75-5-301 and 75-5-303.

Mr. Bowe explained the order of presentation of statements, but stated that the order of presentation would be modified in order to attempt to accommodate the schedules of interested persons who had other commitments. He explained that persons in favor of the adoption of numeric standards for EC and SAR should list themselves as proponents, even if they disagreed with other parts of the proposed rules. He stated that DEQ had submitted a written legal opinion, copies of which were available by the entrance to the room.

#### Statement by Department of Environmental Quality

Art Compton explained that the proposed rules have four elements: (1) numeric standards, with a range of values proposed and irrigation and non-irrigation season values; (2) nondegradation approach; (3) flow-based or 7Q10; (4) a significance determination. In addition, there is an alternative that the rules be non-severable. The technical bases for the numeric

standards are in a DEQ document dated July 2002. On the Tongue River and Rosebud Creek the EC of 1000 during the irrigation season is to prevent reduction in the yield of the sensitive crop of field beans and takes account of rainfall and leaching fraction. The EC of 2000 during the non-irrigation season is to minimize damage to riparian vegetation and aquatic life. On the Powder and Little Powder Rivers, the EC of 2000 during the irrigation season takes account of rainfall and leaching fraction. The EC of 2500 during the non-irrigation season is to minimize damage to riparian vegetation and aquatic life. The amounts are higher than for the Tongue River and Rosebud Creek because the ambient levels are higher. For the Tongue River and Rosebud Creek during the irrigation season, the SAR is 3.5 to prevent reduction in infiltration in soil irrigated with water with an EC of 1000. During the non-irrigation season the SAR is 5.0 to minimize potential damage to riparian soils. For the Powder and Little Powder Rivers, the non-irrigation season SAR is 7.5 because the ambient SAR is higher and for the irrigation season the SAR is 5.0 to prevent reduction in infiltration in soil irrigated with water with an EC of 2000. For tributaries the EC is 500 and the leaching fraction is assumed to be zero. The SAR is 5.0 to minimize the potential reduction in soil infiltration. The biggest issue regarding the levels of numeric standards is DEQ's proposed EC of 2000 for the Tongue River and Rosebud Creek during the non-irrigation season and the Irrigator's proposal of 1000. Increased discharges are regulated by existing nondegradation rules. The flow-based approach recognizes that increased discharges can occur during periods of high flows without affecting uses. The significance determination is in place of the permit requirement because the federal district court has ruled that CBM water does not require a discharge permit. Instead of a permit, DEQ would make a significance determination that the discharge would meet water quality standards and nondegradation rules. If non-severability were adopted, then if any part of the rules were struck down, we would be back where we are now with narrative standards.

Mr. Compton answered questions from Board members. The Tongue River Reservoir has a moderating affect on water quality. Because the water turns over about five times per year, the accumulation of parameters will not be an issue. Any allowance of discharges above the reservoir would take account of the impact on water quality below the reservoir. The TMDL process is expected to be completed late this year.

Art Hayes, Jr., President, Tongue River Water Users Association, said that flow-based standards would hurt water rights and degrade land. The reservoir holds 20,000 acre-feet of Northern Cheyenne Water Compact water. The Tribe wants water of the same quality as when they signed the Compact. The flow-based approach is unworkable because spring run-off and rainfall are unpredictable. Last year, the Big Horn Mountains had 87% of normal snow pack but the reservoir received only 55% of water. The reservoir stores water in the banks and the build-up of CBM water during the non-irrigation season will affect EC and SAR during the irrigation season. Decreases in the quality of Tongue River water will take away the ability to use good water to leach salts from soils. Irrigators should not have to subsidize the CBM industry by spreading CBM water on their fields. Below the reservoir, the SAR is higher.

Rex Mongold has a farm by Miles City and uses T & Y irrigation water. Irrigators have hired water and soil specialists and supplied information to the Board. Industry should be required not to pollute.

Mark Fix has an irrigated farm near Miles City and is chair of the Northern Plains Resource Council (NPRC) CBM Task Force. He supports numeric standards based on low flows as follows: SAR of 3 and EC of 1000 on Rosebud Creek and Tongue River; SAR of 4 and EC of 1600 on Powder and Little Powder Rivers; SAR of 3 and EC of 500 on tributaries. EC and SAR are harmful parameters. NPRC opposes use of a 30-day average for SAR and opposes exemption from nondegradation. Irrigators will be harmed if 20,000 acre-feet of CBM water is discharged each year in the Tongue River. With current levels of SAR, the SAR of one of my irrigated fields increased from 1.8 in 2001 to 5.4 in 2002. CBM water has an EC of 2200 and a SAR of 47 and is poor quality water. Use of it puts tons of salts on irrigated fields. Mr. Fix also submitted a written statement.

Representative Norma Bixby is from House District 5 and spoke on behalf of the Northern Cheyenne Tribe and her district. The Tribe has developed water quality standards. It is important to protect Tribal water resources, including the Tongue River and Rosebud Creek, and not to allow degradation of the water owned by the Tribe. Agriculture is an important industry. Rep. Bixby submitted a letter from the President, Northern Cheyenne Tribe.

Sarah Carlson, Montana Association of Conservation Districts, stated that the Association supports numeric standards, but opposes the flow-based approach, which is believed to be impractical.

John Hamilton is a member of the Tongue River Water Users Association. The land around Miles City is productive, has the longest growing season in the State, and has potential for growing high-value crops. The Tongue River is an outstanding fishery. Water rights are more valuable than land. If water is degraded, the land decreases in value. Low flows must be considered. Protecting crops will protect aquatic life. The DEQ assumptions about leaching fractions are too high and would prevent more efficient use of water, such as center pivot irrigation.

Les Hirsch is the vice chair of the Tongue River Water Users Association. He has served in both houses of the legislature in the past. He is not opposed to energy development. But salts accumulate in the soil and if you increase the salts in irrigation water, you will increase the salts in the soil. There may be no middle ground for compromise. He supports strict numeric standards. He opposes the flow-based approach because flows are not predictable. Under the Montana and Wyoming Compact, Montana is to receive 60% of the Tongue River water, but he questions whether Montana is getting its share. The Tongue River Water Users paid \$5 million to rehabilitate the dam and now it seems they will not be getting water of the quality they used to have.

Bill Courtney is from Sheridan, Wyoming, and has a business, Emit Water Discharge Technology, that treats CBM waters and removes sodium as concentrated brine. He is a proponent of the rulemaking.

Dan Dutton operates a ranch in Carbon County. A lack of water quality standards will decrease the value of irrigated lands. He supports conservative numeric standards to prevent irreparable damage to farmland. Extractive industries need to be good stewards of the land. As we get experience with numeric standards, it may be possible to revise them. Mr. Dutton also submitted a written statement.

Charles Gephart is a soil scientist and consultant to T & Y Irrigation District. He submitted written materials comparing an irrigation well he investigated with CBM water. Well water with an SAR of 13 sealed the soil after 3 years. CBM water has a SAR of about 45. Salt accumulates in the soil and there is not enough water to flush it out.

Mr. Gephart answered questions of Board members. The Tongue River has a historic SAR under 2, but there has still been an accumulation of salt in irrigated soils. CBM water will accelerate the accumulation of salt in the soil. At some point the soil will become sealed. A solution is to treat the water to remove sodium. With respect to SAR, it takes a lot of calcium and magnesium to offset the sodium.

Julie DalSoglio is from the Helena office of the U.S. Environmental Protection Agency (EPA). The EPA supports numeric standards. But EPA questions how the flow-based permit will be implemented and is not comfortable with the modification of the nondegradation rule. The district court decision about CBM discharges is on appeal. EPA also submitted written comments.

Don Skaar is a biologist from Montana Fish, Wildlife, and Parks (FWP). FWP recommends a maximum EC of 1500 on the Tongue River and Rosebud Creek, in order to protect aquatic life. The Tongue River Reservoir is an important fishery and the State Park receives many visitors. Fish eggs are vulnerable to salts. Twenty studies of sodium salts show harm to the hatching success of pike, perch, and walleye. The Powder River has different kinds of fish and FWP has scant data on these.

Bruce Williams of Fidelity Exploration, spoke on behalf of several organizations, including the Montana Coalbed Natural Gas Alliance, Montana Petroleum Association, and various producers. They support Alternative II. During the collaborative process, industry proposed a flow-based process, as a way to protect uses and still allow CBM development. The flow-based approach allows taking advantage of assimilative capacity when it exists. The elements of the rules make a regulatory system. Non-severability keeps the parts of the regulatory system together. EC naturally exceeds 1000 during the irrigation season at Miles City. An EC of 1500 would protect pinto beans. We support a SAR of 6 for the Powder River, because a higher ambient EC allows a higher SAR level. We question a one-size-fits-all approach to tributaries. There are perennial, ephemeral, and intermittent tributaries. There are

perennial tributaries with an EC of 3000-5000. We propose that the numeric standards for EC and SAR for tributaries be the same as the main stem into which they feed.

Brenda Lindlief Hall is attorney for the Tongue River Water Users' Association. They oppose non-severability and they have concerns about nondegradation exemption. EPA also has concerns about the exemption from nondegradation review. Lawful and protective standards are needed. The flow-based approach is problematic as irrigators use the water for limited periods of time and need good water then. DEQ is years behind in permitting and this approach may create further difficulties with enforcement, compliance, and monitoring.

Nick Golden has ranched on Rosebud Creek since 1947. The Creek is about 100 miles long and hay is watered by sub-irrigation. The idea of irrigation and non-irrigation seasons doesn't fit, because the soil is soaked year around. Damage to soil is not reversible. Don't break it if you cannot fix it. Consider re-injection and treatment of CBM water.

Peter Mickelsen has a ranch by Lewistown. He is a member of the Farmers' Union and NPRC. He supports strong regulatory standards. The State has had to deal with the cleanup of mining sites. The benefits of CBM development will go out of state. CBM development has the potential to destroy the water and land needed for agriculture.

John Smart of Helena opposes CBM development. CBM has damaged lands in Wyoming and will destroy wells and aquifers. The corporations do not care. Mr. Smart also submitted a written statement.

Pat Mischel is from Glendive. He supports numeric standards. Water from the Buffalo Rapids Irrigation District is used for agriculture and for lawns and parks. He is concerned that Glendive will have to spend money to remove sodium from Yellowstone River water. He submitted aerial photos showing subdivisions that use irrigation water.

Dena Hoff is from Glendive and made a statement for herself and the Buffalo Rapids Irrigation District. The District represents 350 irrigated farms. They support low numeric standards and oppose the flow-based approach. The Powder River flows into the Yellowstone about 3 miles upstream from the first pumping plant. During low flows the SAR is as much as 40% higher at the pumping plant than in the Yellowstone upstream of the confluence with the Powder. More than half of the irrigated land has heavy clay soil and there is already damage with a SAR of 3. Irrigators have put sprinklers on hold as they wait to see about water quality.

Arleen Boyd is chair of the Stillwater Protective Association. She represented irrigators in the collaborative process. That process did not result in a good outcome. The mandate was unclear; the goal should be to protect agriculture, not to minimize damage. We need protective numeric standards based on science and details about how the standards will be implemented.

Dan Teigen is chair of the NPRC. He supports numeric standards that protect irrigation. He has concerns about the flow-based approach.

Jim Bauder is a scientist from MSU. He spoke on behalf of the Northern Cheyenne Tribe, Buffalo Rapids Irrigation District, and the Tongue River Irrigators. He was a proponent of the Irrigators' original proposal. He recommends absolute, instantaneous values during the irrigation season. He recommends using the flow-based approach only during the non-irrigation season. The timing of irrigation is affected by the availability of water, needs of crops, weather, and work force.

Dr. Bauder answered questions of Board members. The Powder River has a high SAR compared to the Yellowstone River. The Powder River has a significant impact on the Yellowstone River for a considerable distance downstream. The increase in SAR between the confluence and the first pumping station shows that there is little mixing. It is difficult to say what the difference is between a SAR of 3 and a SAR of 3.5 with respect to the impact on irrigators. The Tongue River has much better water than the Powder River. With good water, there is greater sustainability of agriculture. Higher EC and SAR will make a difference over time. The standards being proposed will probably be affected by the TMDL process.

Steve Gilbert spoke on behalf of himself and MEIC. He resides in Helena. DEQ should not assume that there is assimilative capacity of harmful materials. Allowing harmful materials in water is not protecting or maintaining or improving water quality. DEQ's data does not support the 15% leaching fraction assumption. Any EC over 1500 is not protective. DEQ may not be able to enforce the standards. He supports the standards in the original petition. Mr. Gilbert also submitted a written statement.

Roger Muggli spoke on behalf of himself and Tongue & Yellowstone River Irrigation. He has a field that has been used for irrigation for more than 100 years. Two years ago the SAR was 1.43 and now the SAR is 3.47. An average of about 12 inches of rain per year allows irrigation with the water they have now, but if the EC and SAR of the irrigation water increase, there will not be enough rain to leach out the salts. He supports the Irrigators' proposal. Once soil is sealed, there is little that can be done to restore it, even if gypsum and deep ripping is used.

Ric Valois is a founding member of Environmental Rangers. He is from Great Falls. He favors preserving land and water. He lacks faith in DEQ because industry will violate standards and there will be litigation without end. He is concerned that CBM development will result in the end of agriculture.

#### Additional Written Statements on the Notice to Board of Environmental Review forms

Duane Zavadil of Bill Barrett Corp. and CBNG Alliance, Denver Co., is an opponent of the proposed rulemaking but Alternative II is acceptable as a worst-case scenario.

Carol Bass, Fishtail, MT, is a proponent of the proposed rulemaking.

George Nell, Gardiner, MT, is a proponent of the proposed rulemaking.

William Schafer, Montana CBNG Alliance, is a proponent of the proposed rulemaking.

Conclusion of Hearing

At about 3:50 p.m. Chairman Russell announced that public comments were concluded and that the Board expects to consider whether or not to adopt any of the proposed rules at its public meeting in Helena on March 28, 2003.

Attachments:

Copies of the notices 17-187, 17-171

Notice to Board of Environmental Review forms submitted at the hearing

Written materials received at the hearing

Sign-In sheets

Board of Environmental Review January 31, 2003 Hearing Minutes Approved:

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JOSEPH W. RUSSELL, M.P.H.  
CHAIRMAN  
BOARD OF ENVIRONMENTAL REVIEW

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DATE